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ABSTRACT

Prepared as a result of the numerous studies and projects linking contingency management to reading skill development and the frequency with which school districts now employ contingency managers in their curriculum departments, this bibliography is divided into two sections. The first consists of annotations grouped according to the areas around which the reading program is organized: identification of reading levels, selection of skills to be taught, sequence of instruction, and delivery of training, including reinforcement. Each entry in the first section is coded to refer to a more complete bibliographic citation in the second section, a bibliography containing three subsections: books, periodicals, and miscellaneous publications. The bibliography is written in the hope that it will help the reader manage his own inquiry. (HOD)

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CONTINGENCY MANAGEMENT AND READING

An Annotated Bibliography

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INTRODUCTION

Contingency management aims to increase the motivation for doing socially and educationally desirable acts. Among these acts or activities is learning to read – a complex social and educational activity.

The numerous studies and projects linking contingency management to reading skill development frequently represent research of a high order, and their increasing commonness reflects the frequency with which school districts now employ contingency managers in their curriculum departments; i.e., school districts are, more than ever before, taking note that motivation of children is or can be linked to the development of the curriculum.

Practical problems of the application of contingency management to the schoolroom may sometimes be examined by use of 2 or 3, 20 or 30, or 2,000 or 3,000 students. Certainly the modest motivational causal claims made by contingency management studies are unrelated to the size of the population studies. (If it appears one chimpanzee named Sarah can be taught to read through contingency management procedures, it can be claimed that chimpanzees probably have been taught reading through contingency management.) The strength of general statements about the contingency management process derives 1) from the accumulation of positive evidence and 2) from the absence of both negative evidence and reasonable alternative hypotheses.

Incidentally, no animal studies are included in this bibliography. Reading is a principle or an important component in all studies which are included.

The organizational scheme is somewhat arbitrary. Its format is designed to increase its usability by the educational practitioner. Annotations which enumerate information pertinent to the various subject headings are referred to the principal bibliographical list.

The bibliography is divided into two sections: annotations and bibliography entries.

The annotations section is grouped according to the reading areas around which the reading program is organized: identification of reading levels; selection of skills to be taught; sequence of instruction; and delivery of training, including reinforcement. Each entry in the annotations section refers to an entry in the bibliography section under books (A), periodicals (B), or miscellaneous publications (C). Readers will find among the annotations that certain articles or books have been listed more than once. The bibliography is "engineered" with the hope that it will help the reader manage his own inquiry.

Readers unfamiliar with the concepts and terminology of contingency management might first read an introductory text such as Norris G. Haring, *Attending and Responding,* Dimensions Publishing Company, Belmont, California, 1968.

Application of contingency management practices to the classroom apparently requires both an understanding of its principles and considerable practice in its administration. While no studies exist on the misapplication (or unsystematic application) of contingencies to the classroom, readers are cautioned to apply these techniques with care, preferably under the direction of school personnel who previously have demonstrated proficiency in its use.

ANNOTATIONS

The following four section headings (A,B,C,D) are commonly employed by educators as administrative categories for various consumers of education and, hence, have been selected as independent variables by educational researchers.

A. Reading and the Exceptional Child

1. Minority Groups

American Institutes for Research, 1970. A follow-through reading program for predominantly black children who had participated in Head Start. (C1)

Chadwick and **Day**, 1971. 11 black and 14 brown students participated in a summer school academic program. (B9)

Egeland, 1969. "Culturally deprived." (B18)

Fazio, Lohr, and **Screven**, 1971. 34 seven- to thirteen-year-old boys in a predominantly black boys' club were taught reading. (B20)

Hamblin and **Buckholdt**, 1967. Black ghetto first graders were used in a series of experiments to improve academic achievement. (C17)

Hamner, 1968. Black socially-deprived children in a beginning reading program. (C18)

Heitzman, 1970. 30 migrant school pupils, ages six to nine, developed reading and arithmetic skills and social behaviors. (B27)

Kauffman and **Herr**, 1971. Reading response modeling versus token reinforcement with two culturally disadvantaged eighteen-year-old girls. (B36)

Littky and **Bosley**, 1970. Token economy applied to a reading program for black and Puerto Rican students in three second grade classes. (C29)

Martin, Schwyhart, and **Wetzel**, 1967. Three classes of Mexican-American students worked under a token economy or no reinforcement. (B40)

Pikulski, 1971. Disadvantaged black first graders were given a reading task under three different reinforcement conditions. (B46)

Rosenshine and **Mattleman**, 1970. Inner city children. (C35)

Speiss, 1969. 1,200 culturally divergent first grade children were trained in a reading readiness experimental program. (C40)

Speiss and **Olivero**, 1969. Programs were designed for the culturally divergent first grade children of the Southwest. (C41)

Staats and **Butterfield**, 1965. A fourteen-year-old Mexican-American delinquent boy was given reading training over a 4½-month period. (B52)

Staats, Minke, and **Butts,** 1970. Junior high black, culturally deprived students in a motivated learning reading program. (C42)

Wolf, Giles, and **Hall,** 1968. 15 sixth graders and 1 fifth grader participated in an after-school remedial reading program in an urban poverty area. (B66)

2. Retarded Children

Ayllon and **Barnes,** 1970 a. 24 trainable mentally retarded children participated in a six-week academic program. (C2)

Ayllon and **Barnes,** 1970 b. Procedures for implementing a schoolwide nine-month token reinforcement program for trainable mentally retarded children. (C3)

Ayllon and **Barnes,** 1970 c. Experiment 1: 42 trainable, mentally retarded children in a six-week summer program designed to improve academic behaviors; Experiment 2: 31 trainable, mentally retarded children in a choice of reinforcement or no reinforcement for work performed. (C4)

Bernstein, 1971. The subjects, ages eight to eleven, had disparate intellectual functioning and reading achievement levels. (C6)

Bijou et al., 1966. 27 trainable and educable mentally retarded children were taught academic skills using programed materials. (B4)

Birnbrauer et al., 1965. 8 trainable and educable mentally retarded children, ages nine to thirteen, were given instruction in reading, arithmetic, and writing skills using token reinforcement. (A1)

Birnbrauer et al., 1965. 17 social and academic behaviors of mildly or moderately retarded children, ages eight to fourteen. (B6)

Brown et al., 1970. Sight vocabulary program initially given to a twelve-year-old TMR girl extended to 6 TMR youngsters, ages twelve to fourteen. (B7)

Camp and **Doorninck,** 1971. 66 retarded seven to thirteen-year-olds disadvantaged in sight vocabulary development. (B8)

Kortas, 1969. 17 EMR's CA eight to twelve with programed materials. (C28)

Staats et al., 1967. Motivated learning reading program of 18 students, including educable mentally retarded. (B55)

3. Early Learning

Hamblin et al., 1969. Two-year-old children developed sight vocabulary. (B23)

Hamblin and **Hamblin,** 1972. 32 inner-city preschoolers rewarded for working and reading improvement. (B24)

Levin, 1967. Intangibles (surprise) for beginning readers. (B38)

Pfeiffer, 1969. Preschoolers with a mental age of three and above were taught beginning reading skills. (C32)

Staats et al., 1964. Rate of symbol recognition among four-year-olds. (B53)

Staats et al., 1964. Preschool. (B54)

Staats, Staats, and **Schutz**, 1962. Technical and theoretical studies. (C43)

Staats et al., 1962. Preschool. (B57)

4. Delinquents, Adults, and Other Underachievers

Bednar et al., 1970. Twelve- to eighteen-year-old institutionalized or delinquent boys were taught reading. (B2)

Bijou, 1971. Disturbed children were treated under laboratory (controlled environmental) conditions. (C7)

Buckholdt et al., 1971. 5 inner-city subjects, ages seven to nine in a programed developmental reading class. (C8)

Christopherson, Davis, and **Wolf**, 1970. 8 disadvantaged third graders and 1 sixth grader in an automated reading program. (B11)

Clark, Lachowicz, and **Wolf**, 1968. Junior high dropout girls at a neighborhood youth corps facility. (B12)

Clark and **Walberg**, 1968. 62 urban children who were considered potential dropouts were given massive verbal praise in a reading program. (B13)

Cohen, 1967. 28 delinquent boys ages 14.6 to 18.1 with a history of academic failure in a training school were given reinforcement for learning. (C10)

Dee, 1972. Emotional problem children completed contracts in crisis classroom. (B16)

Egeland, 1970. Second and third grade culturally deprived children were taught reading. (B18)

Gormly and **Nittoli**, 1971. Juvenile delinquent males. (B21)

Hamblin et al., 1971. Case studies of young, deprived, hyperaggressive, and autistic children. (A5)

Hamblin and **Hamblin**, 1972. Reading program for inner-city disadvantaged children. (B24)

Haring and **Hauck**, 1969 a. 4 nine- to ten-year-olds who were third, fourth, and fifth grade disabled readers under controlled laboratory conditions. (B26)

Haring and **Lovitt**, 1967. Operant procedures were discussed as used with preschool autistic, educable, mentally retarded, trainable mentally retarded, neurologically impaired, and potential dropouts. (A6)

Haring and **Lovitt**, 1969. Discusses application of functional analysis of behavior to elementary children with learning disabilities and inappropriate school behavior. (C21)

Hauserman and **McIntire**, 1970. 12 children in first and second grade who were predicted reading failures. (C22)

Heitzman, 1970. Migrants. (B27)

Heitzman and **Putnam**, 1972. Adult basic education. (B28)

Hewitt, 1964. Autistic boy of thirteen was taught primary reading skills. (B29)

Hewitt, 1967. A design for an engineered classroom for emotionally disturbed children. (B30)

Hewett et al., 1969. 30 emotionally disturbed elementary and junior high students participated in an engineered classroom program. (C23)

Hewett, **Mayhew**, and **Rabb**, 1967. 26 multiple handicapped children were trained in an experimental reading program. (B31)

Hewett, **Taylor**, and **Artuso**, 1969. 54 emotionally disturbed students, ages eight to eleven, were treated in an engineered classroom. (B32)

Honeycutt and **Soar**, 1972. 366 culturally disadvantaged first grade children received academic "subject matter" training. (C25)

Lovitt and **Curtis**, 1969. A twelve-year-old subject in a class for children with behavioral disorders was trained in various academic areas, including reading. (B39)

Nolen, **Kunzelmann**, and **Haring**, 1967. Behavior modification techniques were used in a junior high disabilities classroom with 8 students, ages twelve to sixteen. (B44)

Raygor, 1964. Suggests that behavioral principles may be applied to college students. (B48)

Reed, 1970. Operant conditioning was used with four academically deficient college sophomores. (C33)

Sloane et al., 1970. Experiment 1: Contingency contracting was used with low achieving college freshmen. Experiment 2: Three groups of college students used study packets and contingency contracting. (C38)

Smith, **Brethower**, and **Cabot**, no date given. Several levels under various contingency conditions learned a variety of academic skills. (C39)

Vaal, 1971. 10 fourth, fifth, and sixth grade children with a minimum of two years' reading deficiency participated in a resource room. (B58)

Van Mondfrans, 1967. 16 pre- and early adolescent retarded readers and 8 mentally retarded readers in grades four, five, and six in a reading program. (C48)

Wadsworth, 1971. 10 third grade boys with severe reading disabilities were reinforced for "acceptable" academic and social behaviors. (B59)

Wark, 1966. 5 college and Upward Bound subjects increased reading and writing rates. (C49)

Wark, 1969. 5 college students established individual contracts to improve reading and study skills. (B60)

Wark, Kolb, and **Tonn**, 1968. 7 rural and urban disadvantaged subjects volunteered to participate in project Upward Bound reading program. (B61)

Whitlock, 1966. Average IQ, but failed to respond to tutoring. (B62)

Wotkiewicz and **Minor**, 1969. 15 male, high school age delinquents in a cottage program to modify social behavior and educational patterns. (C51)

B. Reading: Teaching the Basic Skills

Annotations in this section refer to prereading and beginning reading experiences: most commonly, word attack skills and isolated vocabulary. All studies include functionally illiterate pupils as subjects.

American Institutes for Research, 1970. A follow-through program. (C1)

Bijou, 1971. Sight vocabulary was emphasized with instruction in simple phonics, auditory discrimination, and visual discrimination. (C7)

Bijou et al., 1966. After word discrimination training, student was advanced to the sight vocabulary program designed to teach reading of words, phrases, and sentences. (B4)

Birnbrauer et al., 1965. Phonics and sight vocabulary. (A1)

Brown et al., 1970. A basic sight vocabulary. (B7)

Buckholdt et al., 1971. Programed basic reading skills. (C8)

Camp and **Doorninck**, 1971. Sight vocabulary training, first through third grade level. (B8)

Drass and **Jones**, 1971. One subject was taught capital letters. (B17)

Egeland, 1969. Programed materials. (C12)

Egeland, 1970. Sight vocabulary and phonics. (B18)

Gray, Baker, and **Stancyk**, 1969. Word attack skills. (B22)

Hamblin and **Buckholdt**, 1967. The learning of sounds with a language master and tutor (Experiment 4). 58 primer words (Experiment 5). (C17)

Hamblin et al., 1969. A sight vocabulary. (B23)

Hamblin and **Hamblin**, 1972. Initial Teaching Alphabet and language master materials used to teach basic skills and sight vocabulary. (B24)

Hamner, 1968. Basic reading skills including vocabulary. (C18)

Haring and **Hauck**, 1969 b. Vocabulary and word discrimination tasks. (B26)

Haring and **Hayden**, 1968. Initial reading instruction. (C20)

Hauserman and **McIntire**, 1970. Sight vocabulary.

Hewett, 1964. Match and classify 50 words and picture cards, write the alphabet, and spell words (N=1). (B29)

Hewett, **Mayhew**, and **Rabb**, 1967. Vocabulary and word discrimination tasks. (B31)

Holt, 1971. Second grade programed reading materials. (B33)

Levin, 1967. Language experience approach. (B38)

Littky, 1970. Second grade programed materials. (C25)

McKerracher, 1967. Vocabular (B42)

Pfeiffer, 1969. Beginning reading skills and sight vocabulary. (C28)

Pikulski, 1971. Vocabulary. (B46)

Schaeffer and **Schaeffer**, 1969. Word attack skills. (B51)

Smith, **Brethower**, and **Cabot**, no date. Grapheme and phoneme instruction. (C39)

Speiss, 1969. Readiness skills, associative vocabulary, sensory attributes, matching and perceiving differences, listening and aural discrimination. (C40)

Speiss and **Olivero**, 1969. Reading readiness skills. (C41)

Staats, **Minke**, and **Butts**, 1970. Vocabulary and syntactical elements. (C42)

Staats et al., 1967. Words and syntactical elements. (B55)

Van Mondfrans, 1967. Word recognition and vocabulary acquisition. (C48)

Whitlock and **Bushell**, 1967. Vocabulary taught in sentences. (B63)

C. Reading: Teaching the Complex Skills

This section includes studies in the development of reading for meaning, test taking behaviors, and identification of subordinate and superordinate ideas as well as knowledge retention.

Carlson, **Hotchkiss**, and **Walker**, 1970. Rate and retention of a unique task. (C9)

Cotler, 1969. Comprehension. (B15)

Gray, **Baker**, and **Stancyk**, 1969. Contextual training. (B22)

Kauffman and **Herr**, 1972. Comprehension and rate. (B36)

Martin, **Schwyhart**, and **Wetzel**, 1967. Reading books and completing assignments. (B40)

Reed, 1970. Topic sentences. (C33)

Schaeffer and **Schaeffer**, 1969. Comprehension in materials having increasingly involved syntax and concept density. (B51)

Schutz, **Sullivan**, and **Baker**, 1968. Rate. (C37)

Sloane et al., 1970. Study packets. (C38)

Vaal, 1971. Study behavior and completion of assignments in reading and language materials. (B58)

Wark, 1966. Rate. (C49)

Wark, 1969. Rate and study skills. (B60)

Wark, 1971. Studying, testing (attending), behavior. (C50

D. Administering the Reading Program

This section includes studies in class organization, the delivery of incentives, and the upgrading of teaching skills by the director of the reading program. Listings under Class Organization cover incentives, the physical layout of classrooms, the learning topography, and classroom heterogeneity *vis a vis* teaching practitioners and consumers.

1. Class Organization for Individualization

American Institutes for Research, 1970. Program involving first through third grade students using sequenced materials and reinforcement techniques. (C1)

Ayllon and **Barnes**, 1970 b. Nine month program of token reinforcement with orientation for teacher and children regarding response priming, reinforcer priming, diagnostic evaluation, and analysis of test scores. (C3)

Bijou, 1971. Program for young handicapped children. (C7)

Bijou et al., 1966. Classroom environment and the development of instructional materials. (B4)

Birnbrauer et al., 1965. Procedures for commencing instruction, equipment choices, and application of materials to individual students. (A1)

Camp and **Doorninck**, 1971. 3 neighborhood aides and 2 volunteer college students acted as tutors. (B8)

Carlson, **Hotchkiss**, and **Walker**, 1970. Standard classroom materials and a unique task involving sound-symbol associations. (C9)

Chadwick and **Day**, 1971. Management techniques of 1 teacher and 2 teacher aides working with 25 minority students. (B9)

Christopherson, **Davis**, and **Wolf**, 1970. Cubicles and audiovisual aids for individual instruction. (B11)

Clark and **Walberg**, 1968. 5 classes of 10 to 15 students tallied their own responses under teacher direction. (B13)

Drass and **Jones**, 1971. Tutors used individual assignments and reinforcement. (B17)

Egeland, 1970. Second and third grade experimental and control students part of regular classroom population. (B18)

Gormly and **Nittoli**, 1971. Self-selection of materials building reading comprehension. (B21)

Graubard et al., 1970. Reading rate and responses were reinforced under normal classroom population conditions. (C16)

Hamblin and **Buckholdt**, 1967. Various programs for various groups. (C17)

Haring, 1968. Instructional procedures and materials for improving performance. (B7)

Haring and **Hauck**, 1969. Carrels and electronic devices in individual sessions. (C19)

Haring and **Hayden**, 1968. Programs and techniques using behavior modification. (C20)

Haring and **Lovitt**, 1969. Techniques for administering a contingency-managed system in a natural school setting. (C21)

Hewett, 1967. An engineered classroom. (B30)

Hewett et al., 1969. Room organization plans and pupil rotation procedures.

Hewett, **Taylor**, and **Artuso**, 1969. Classroom organization, activity centers, and student record keeping. (B32)

Holt, 1971. Choice between reward centers or continuing with academic work. (B33)

Jacobs, 1970. Slow learners in regular classroom settings. (C22)

Kortas, 1969. Tokens with a group. (C28)

Kubany and **Sloggett**, 1971. Class placement using reinforcers in determining ability level. (B37)

Littky and **Bosley**, 1970. Teachers and paraprofessionals in an urban school setting. (C29)

McKenzie et al., 1968. Cooperation between the school and the individual home. (B41)

McKerracher, 1967. Consumables and social reinforcers. (B42)

Reid, 1971. Teachers prescribe specific reading treatment activities as a result of diagnosis. (C34)

Smith, Brethower, and **Cabot**, no date given. Experiments with various students under different contracts, materials, reward systems, and environments. (C39)

Speiss, 1969. Entry skills behavior packages for culturally divergent children and basic classroom management strategies. (C40)

Staats, Minke, and **Butts**, 1970. Housewives and high school student volunteers under the supervision of a teacher trained in experimental methods. (C42)

Staats et al., 1967. Adult volunteers and high school students administered the reading program. (B55)

Staats, Van Mondfrans, and **Minke**, 1967. Procedures for administering a reading program on a one-to-one basis. (C44)

Stephens, 1970. Details for directed teaching of children with learning and behavioral handicaps. (A12)

Van Mondfrans, 1967. Housewives and tutors administer the reading program. (C48)

Willis, Morris, and **Crowder**, 1972. Individually prescribed reading material and eighth grade behavioral engineers with individuals or pairs. (B64)

2. Managing Incentives

American Institutes for Research, 1970. Teachers in this program systematically reinforce desired behaviors and responses with edibles, manipulables, or social reinforcers. (C1)

Ayllon and **Barnes**, 1970 b. Under the plan described, token reinforcement for correct academic work could be exchanged for back-up reinforcers. Forms for recording token exchanges are appended. (C3)

Ayllon and **Barnes**, 1970 c. Token reinforcement system used with trainable mentally retarded children. (C4)

Bednar et al., 1970. Money reinforcement for reading-related behaviors and for reading achievement given under fixed, intermittent, and no reinforcement conditions. (B2)

Bernstein, 1971. Poker chips reinforce responses to programed reading materials. (C6)

Bijou, 1971. Teaching procedures were developed which included reinforcement schedules. (C7)

Bijou et al., 1966. Fixed-ratio schedule and fading procedures in the token reinforcement system. Tokens were backed up by consumables, manipulables, and money. (B4)

Birdwell, 1971-1972. Sample contract for a reading and study skills program. (B5)

Birnbrauer et al., 1965. Token reinforcement backed up by self-selected items, verbal praise, immediate knowledge of results, and an unsystematic variable reward schedule with the children. (A1)

Birnbrauer et al., 1965. Social and token reinforcement; tokens exchanged for edibles, manipulables, or a trip to town to purchase a more expensive item. (B6)

Buckholdt et al., 1971. Token reinforcement backed up by edibles, toys, or a field trip alternating conditions of reinforcement and no reinforcement. (C8)

Brown et al., 1970. Candy bars and nuts reinforce responses in sight vocabulary training. (B7)

Camp and **Doorninck**, 1971. Tokens of three monetary values given during testing and training sessions. (B8)

Chadwick and **Day**, 1971. Verbal and token reinforcement given for accuracy and speed in academic work. Tokens exchanged for lunch, consumables, and field trips. (B9)

Chan, **Chiu**, and **Mueller**, 1970. Social and consumable reinforcers. (B10)

Christopherson, **Davis**, and **Wolf**, 1970. Positive and negative reinforcement used for responses to reading materials. (B11)

Clark, **Lachowicz**, and **Wolf**, 1968. Token system, backed up by money for points and outside wages, used in a program for school dropouts. (B12)

Clark and **Walberg**, 1968. Massive verbal praise and fading procedures used in an after-school reading program. (B13)

Clark and **Walberg**, 1969. Secondary reinforcement. (B14)

Cohen, 1967. Token system in which points were exchanged for money on an individual or group basis. (C10)

Cotler, 1969. Money. (B15)

Drass and **Jones**, 1971. Students and tutors exchanged their coupons for consumables and manipulables. Tutors received verbal praise. (B17)

Egeland, 1969. Consumables, tokens, and social reinforcers. (C12)

Egeland, 1970. Changing reinforcement schedules used during a school year long program. Tokens were backed up by manipulables. (B18)

George, 1970. Tokens in the form of stars were exchangeable for money which in turn was exchangeable for edibles or trinkets. Fixed-ratio and variable-ratio reinforcement schedules used under various conditions. (C14)

Gray, **Baker**, and **Stancyk**, 1969. Tokens or poker chips given for correct responses. Consumables were the back-up reinforcement. (B22)

Graubard et al., 1970. Tokens given for individual and group reading and social behaviors. (C16)

Hamblin and **Buckholdt**, 1967. Token exchange program with money as the back-up reinforcer used in Experiment 2; continuous food exchange used in Experiment 4; consumables and manipulables served as back-up reinforcers in Experiment 5. (C17)

Hamner, 1968. Tangible and social positive reinforcement. (B18)

Haring, 1968. Techniques to implement a reinforcement program. (A7)

Haring and **Hauck**, 1969 a. Consumables and manipulables given under varying schedules of reinforcement; continuous and variable-ratio. Fading procedures. (B26)

Haring and **Hauck**, 1969 b. Reading performance stimulated by extra recess and physical education activities; graphed performance data used as reinforcer. (C19)

Haring and **Hayden**, 1968. Reinforcement and classroom management discussed in articles by experts in behavior modification procedures. (C20)

Hauserman and **McIntire**, 1970. Fading procedures and reinforcement techniques with tangible and social reinforcement. (C12)

Heitzman, 1970. Tokens. (B27)

Heitzman and **Putnam**, 1972. Token economy. (B28)

Hewett et al., 1969. Manipulables and consumables given in exchange for completed work record cards. (C23)

Hewett, 1964. Autistic child given consumables and manipulables for correct responses. (B29)

Hewett, 1967. Techniques of implementing the engineered classroom. (B30)

Holt, 1971. RE (reinforcement event) Menu pictured student-choice manipulables. (B33)

Homme and **Tosti**, 1965. Management and mismanagement of contingencies, effects of reinforcement, and reinforcing events. (B34)

Honeycutt, 1972. Limitations of social reinforcement with some groups. (C25)

Jacobs, 1970. Group and individual rewards to improve reading skills. (C22)

Kauffman and **Herr**, 1971. Token reinforcement used to increase reading skills. (B36)

Lovitt and **Curtiss**, 1969. Self-imposed contingencies associated with increased academic rate in the subject used in addition to conditions in which the teacher specified the contingencies. (B39)

Martin, Schwyhart, and **Wetzel**, 1967. Token reinforcement system in a high school reading program included back-up reinforcers of grades, letters of commendation, and released time for school activities. (B40)

Mason, 1968. Heavy reinforcement of reading outside of school serves as a stimulus if it is known what is reinforcing to the student. (C31)

McKenzie et al., 1968. Special privileges and monetary remuneration for grades with penalties for incomplete work. (B41)

Nolen, **Kunzelmann**, and **Haring**, 1967. Activities known to be highly interesting established as reinforcement contingencies. (B44)

Pfeiffer, 1969. Wages and tokens given on immediate and delayed basis; reinforcement paired with social approval; fading procedures. (C32)

Raygor, **Wark**, and **Warren**, 1966. Green light was secondary reinforcer used to increase speed of reading. (B49)

Schaeffer and **Schaeffer**, 1969. Variable-interval schedule of reinforcement used to shape "scholarly" behaviors and attitudes. (B51)

Schutz, **Sullivan**, and **Baker**, 1968. Types of reinforcement schedules used in addition to no reinforcement included fixed-interval, variable-interval, and variable-ratio. (C37)

Sloane et al., 1970. College credits, money, and voluntary limitation of activities to specified conditions were the contingencies. Fading procedures. (C38)

Smith, **Brethower**, and **Cabot**, no date. Children were awarded tokens which were exchanged for free time or money and praise under various contract systems. (C39)

Speiss, 1969. Schedules of token reinforcement and fading techniques formed part of the first grade reading program. (C40)

Speiss and **Olivero**, 1969. Possible rewards explained to children prior to the lessons. (C41)

Staats and **Butterfield**, 1965. Token reinforcement system used in which the subject could exchange tokens for manipulables and consumables. (B52)

Staats, **Minke**, and **Butts**, 1970. Token reinforcement system backed up by money or manipulables. (C42)

Staats et al., 1964. Token reinforcers among four year olds. (B54)

Staats et al., 1967. Tokens exchanged for money or manipulables. (B55)

Staats, **Van Mondfrans**, and **Minke**, 1967. System of extrinsic reinforcement using tokens backed up by monetary reward. Reinforcement progressively reduced as training progresses. (B40)

Tabor, **Franklin**, and **Babcock**, 1967. Tokens for consumables and manipulables. (C45)

Van Mondfrans, 1967. Token and monetary reinforcement. (C44)

Wadsworth, 1971. Points for tangibles and free time. (B59)

Wark, 1966. Positive light reinforcement, avoidance buzzer, and extinction procedures used. (C49)

Wark, 1969. Self-reward system developed to increase reading and study skills. (B60)

Wark, 1971. Social and self-reinforcing reading-study behaviors where the testing-studying situation is anxiety producing. (C50)

Wark, Kolb, and **Tonn**, 1968. Light (positive) and buzzer (negative) used. (B61)

Whitlock, 1966. Tokens. (B62)

Winett et al., 1971. Tokens exchanged for tangibles. (B65)

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